REMARKS

With this Response, claims 44-46 are added. No claims are amended or canceled. Therefore, claims 29-46 are pending.

ALLOWABLE SUBJECT MATTER

Applicants acknowledge that claims 33, 38, and 43 were objected to as being dependent upon rejected base claims, but would be allowable if rewritten in independent form. Applicants respectfully assert that the rejection of the independent claims from which they depend is overcome, meaning these claims are allowable as currently written.

REJECTIONS UNDER 35 U.S.C. § 103

Claims 29-32, 34-37, and 39-42 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the article "A New Flexible Architecture for Variable Length DC Targeting Shape-Adaptive Transform, IEEE Publication 0-7803-5041-3/99, pages 1949-1952, published in 1999, of Thuyen Le and Manfred Glesner (hereinafter "Thuyen Le") in view of U.S. Patent No. 6,687,724 of Mogi et al. (hereinafter "Mogi"). Applicants submit that these claims are not rendered obvious by the cited references for at least the following reasons.

Claim 29 recites the following:

> receiving a multimedia signal having data values;
> forming the data values into a matrix of inputs [X];
> forming a matrix [A] of predetermined values and multiplication operations;
> **factoring [A] into a butterfly matrix [B], a shuffle matrix [S], and a multiplication matrix [M]**, wherein the multiplication operations are selectively positioned into pairs within [M]; and
> executing a Single Instruction Multiple Data (SIMD) instruction that multiplies [X], [B], [S], and [M] together to obtain a matrix of outputs [Y].

Independent claims 34 and 39 similarly recite factoring a matrix [A] into a butterfly matrix [B] and other matrices.

The Office Action cites Thuyen Le as disclosing a butterfly matrix. Specifically, matrix [F] of the cited reference is explained at page 1950. The Office Action further states on pages 5 to 6 that [F] discloses a butterfly matrix, the Office Action asserting that "each individual element of [F] can be arbitrarily assigned." This assertion is not supported by the cited reference.

Applicants note that the paragraph on page 1950 directly below equation (3), which defines [F], states, "Since the assignment of γ in **F** is arbitrary...." Applicants further note that the reference is clear that **it is the assignment of the value γ that is arbitrary**, and **not** "each individual element of [F]," as erroneously asserted in the Office Action. Applicants note that [F] in equation (3) could be written as:

$$\mathbf{F} = \gamma[\ldots],$$

where [...] represents the matrix in its non-scaled form, and the scaling factor γ applies to each individual element of [F]. That is to say, γ is a variable multiplier with which to scale the matrix. Thus, it the reference makes clear that the form of the matrix [F] is as shown in equation (3), which may be scaled in any manner. The important part for the reference is the form of the matrix, not the scaling factor. Thus, the assertion in the Office Action is directly in contrast to what is disclosed in the cited reference. Therefore, the cite reference does not support what is asserted in the Office Action.

Thuyen Le fails to disclose or suggest matrix [F] as recited in the independent claims. Mogi fails to cure the deficiencies of Thuyen Le. Whether alone or in combination, the cited references fail to disclose at least one element of the claimed invention, and therefore fail to support a prima facie case of obviousness under MPEP § 2143 of the independent claims. Applicants thus submit that the remainder of the claims, including new claims 44-46, depend from nonobvious base claims, and therefore are allowable under MPEP § 2143.03 for at least the same reasons as the independent claims.
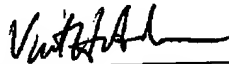
CONCLUSION

For at least the foregoing reasons, Applicants submit that the rejections have been overcome. Therefore, all pending claims are in condition for allowance, and such action is earnestly solicited. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application.

Examiner: C.C. Do
Art Unit: 2193

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Attorney Docket No.: 042390.P8657

PAGE 13/14 * RCVD AT 3/14/2006 9:01:04 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-3/9 * DNIS:2738300 * CSID:5034669651 * DURATION (mm-ss):06-06
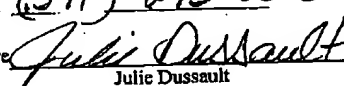
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02-2666.

Respectfully submitted,
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Date: _3/14/2006_____

(signature)

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I hereby certify that this correspondence is being facsimile transmitted on the below date to the United States Patent and Trademark Office at:

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Signature _(signature)_ Julie Dussault   _3/14/2006_
          Julie Dussault   Date

Examiner: C.C. Do
Art Unit: 2193

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